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HotMaps - Heating and Cooling: Open Source Tool for Mapping and Planning of Energy Systems

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Abstract: HotMaps will develop, demonstrate and disseminate a toolbox to support public authorities, energy agencies and planners in strategic heating and cooling planning on local, regional and national levels, and in-line with EU policies. The toolbox will facilitate the following tasks on a spatially disaggregated level: (1) Mapping heating and cooling energy situation including renewable and waste heat potentials in GIS layers; (2) Model the energy system, considering hourly matching of supply and demand, demand response etc.; (3) Supporting the comprehensive assessment of efficient heating and cooling according to the Energy Efficiency Directive: (4) Comparative assessment of supply and demand options and of given scenarios until 2050 regarding e. g. CO₂-emissions, costs, share of renewables. An open data set for EU-28 will be created to perform those tasks in virtually any EU region up to a 250x250m level, which will reduce barriers for authorities to heating and cooling planning. HotMaps will allow for updating locally available data and links to existing models. The software will be developed in close cooperation with the target group, within the consortium and beyond. Moreover, the toolbox will be validated and demonstrated in 7 pilot areas to provide a tested and user friendly software entirely based on user needs. We defined a strategy how to ensure the wide usability, adjustability and application of the toolbox within and beyond the project duration: (1) The consortium is fully committed to the open source idea: All EU-28 data and the source code will be open and we will link with open source energy modelling communities; (2) Training activities will be carried out, including a strategy how to continue after the project; (3) Academic partners will train students on HotMaps in their teaching activities. Our consortium includes leading experts on energy planning in Europe, modelling and tool development, dissemination and various public authorities.

Thematic dimension n° 1

Presentation format: oral

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